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The present state of pelican populations (*Pelecanus onocrotalus* and *P. crispus*) in Kazakhstan

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Only the White Pelican *Pelecanus onocrotalus* and Dalmatian Pelican *P. crispus* are found, in small numbers, in Kazakhstan. They inhabit large reservoirs, lake systems and the deltas of several large rivers. Due to anthropogenic influences, especially land reclamation, the

TABLE 1
The number of nesting pairs of White Pelicans in Kazakhstan

Years	Location	No. of colonies	No. of pairs	Reference
1985	Lakes of lower reaches of Irghiz and Turgai	2	20-30	Aueзов 1986
1987	Sarikopa lake system	1	350	E. M. Aueзов pers. comm.
1984-87	Naurzum Reserve	1	4-200	Gordienko 1989
1984-85	Ily River delta	1	1700	Zhatkanbayev 1986
1986-88	Ily River delta	1	1500-2500	Zhatkanbayev & Gavrilov 1990
1986	Lake Balkhash	1	250-300	E. M. Aueзов pers. comm.
1982	Tentek River delta	1	150	B. P. Annenkov pers. comm.
1987	Tentek River delta	1	400	B. P. Annenkov pers. comm.
1985	Kara Ertis River delta	1	300	N. N. Beresovikov & B. V. Sherbakov pers. comm.

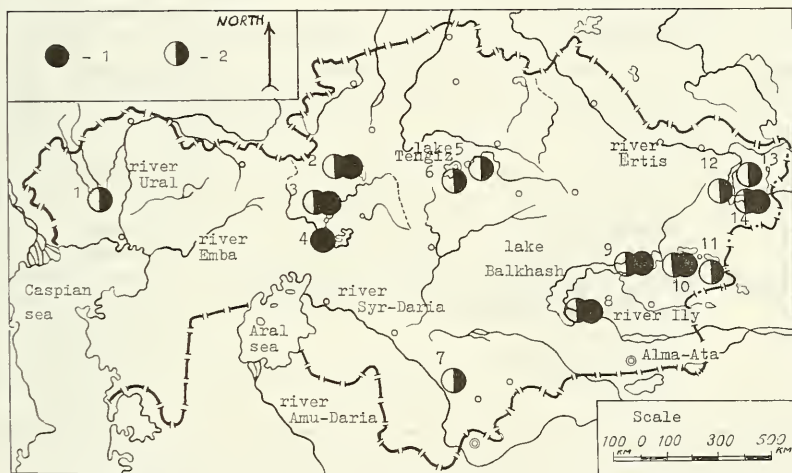


Figure 1. Distribution of pelican colonies in Kazakhstan. Key (inset): 1, White Pelican; 2, Dalmatian Pelican. Localities: 1, Kamysh-Samar lake system, lower reaches of Kushum River, Dongelek storage lake; 2, Naurzum Reserve; 3, Sarikopa lake system; 4, lakes of lower reaches of Irghiz and Turgai rivers; 5, Lake Korgalzhin; 6, Lake Tenghiz; 7, Shoshkakol lake system; 8, Ily River delta; 9, Lake Balkhash; 10, Tentek River delta; 11, Lake Alakol; 12, Bukhtarma storage lake; 13 small lake east of Kurchum settlement; 14, Kara Ertis River delta.

deterioration of hydrological conditions, and fires, areas suitable for their nesting have diminished, and many colonies have disappeared in the last half-century. Both species are included in the *Red Data Book* for Kazakhstan (1978), and the Dalmatian Pelican also in the *ICBP Red Data Book* (1981).

TABLE 2
The number of nesting pairs of Dalmatian Pelicans in Kazakhstan

Years	Location	No. of colonies	No. of pairs	Reference
1970s	Kamysh-Samar lake system, lower reaches of Kushum River, Dongelek storage lake	Separate nests	10	V. L. Shevchenko & P. V. Debelo pers. comm.
1987	Sarikopa lake system	1	50	E. M. Auevov pers. comm.
1982-87	Naurzum Reserve	1	3-20	Gordienko 1989
1972-74	Lake Tenghiz	1	7-12	Volkov 1985
1975-82	Lake Korgalzhin	1	10-88	Volkov 1985 and pers. comm.
1982-87	Lake Korgalzhin	1	70-315	Andrusenko & Minakov 1986; N. N. Andrusenko pers. comm.
1988	Shoshkakol lake system (Shimkent region)	1	6	V. V. Lopatin, R. R. Sibgatullin & M. E. Buketov pers. comm.
1984, 1986	Lake Balkhash	2	55-90	Auevov 1986 and pers. comm.
1984-85	Ily River delta	5	650-820	Zhatkanbayev 1986
1986-88	Ily River delta	4	780-920	Zhatkanbayev & Gavrillov 1990
1979, 1986	Lake Alakol	1	8	B. P. Annenkov and E. M. Auevov pers. comm.
1980	Tentek River delta	1	6	B. P. Annenkov pers. comm.
1981	Tentek River delta	1	4	
1982	Tentek River delta	1	7	
1987	Tentek River delta	1	253-262	
1979-82	Kara Ertis River delta	1-7	40-350	N. N. Beresovikov & B. V. Sherbakov pers. comm.
1983	Bukhtarma storage lake	1	5	
1985	Small lake east of Kurchum settlement (East Kazakhstan region)	1	6	

White Pelican

In the 1940s and 1950s the White Pelican nested along the northeastern coast of the Caspian Sea, in the deltas of the Volga, Ural and Emba rivers, and in the Syr-Daria delta, Aral Sea (Shnitnikov 1949, Dolgushin 1960). In the 1980s nesting occurred at the lakes of the Turgai Depression, the Naurzum Reserve, Lake Balkhash, and in the deltas of the Ily, Tentek and Kara Ertis. Details are given in Table 1. The present breeding population of White Pelicans in Kazakhstan is c. 4000 pairs.

Dalmatian Pelican

In the 1940s and 1950s Dalmatian Pelicans nested at many reservoirs and deltas of large rivers in the steppe and desert areas of Kazakhstan

(Shnitnikov 1949, Dolgushin 1960). In the 1970s and 1980s this species was found only at the lakes of the Ural region, Turgai Depression, Naurzum Reserve and Tenghiz-Korgalzhin Depression, the Shoshkakol lake system in the Shimkent region, the Ily River delta, Lakes Balkhash, Alakol, Zaisan and Bukhtarma storage lake, and the Kara Ertis River delta. Details are given in Table 2. The present breeding population in Kazakhstan is c. 1500–1800 pairs.

Problems of pelican conservation

The main factors responsible for the decrease of pelicans in Kazakhstan are poaching, disturbance of nesting pairs, fires, poisoning by pesticides, sudden changes of water level in reservoirs, cutting of reeds, and decrease of fish. The Cormorant *Phalacrocorax carbo* may be a competitor for food and space in breeding colonies. Primary predators are the Carrion Crow *Corvus corone* and Herring Gull *Larus argentatus*, both of which eat eggs and downy chicks. Also small chicks leaving nests may be eaten by the sheat-fish (*Silurus glanis* L.).

Pelicans are not protected in Kazakhstan. They have not been reared in zoological gardens. In order to preserve pelican populations in the republic it is necessary to create a reserve in the Ily River delta, the size of which should be no less than 65,000 ha. It is there that the largest pelican population of Eurasia is found. Additional reserves should be created in the deltas of the Tentek and Kara Ertis. It would also be advisable to give serious consideration to any hydrotechnical installations which would influence hydrological conditions in pelican habitats. Policies involving fishing, hunting, poaching, harvesting reeds, fires, and pasturing animals close to pelican colonies should be written and approved by government agencies. It is necessary to monitor pelican numbers and study biological and ecological factors, especially toxic chemicals, that are affecting pelican colonies.

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